

REMARKS**I. Claim Status**

Claims 1- 31 are pending.

Claims 1-31 stand rejected.

II. Amendments

Claims 1, 3, 7, 12, 28 and 29 are amended to more particularly point out what the Applicant considers his Invention. No new matter is added by the claim amendments. The volume ranges set forth in the amended claims are supported by the table displayed on pages 7-8, and the discussion of the table information (8:5-15). Specifically, the discussion on page 8 describes the effect of reducing filler amounts to improve core performance, while maintaining the required weight.

III. Claims Rejections Under 35 U.S.C. 102

Claims 1-31 stand rejected under 35 U.S.C. 102(e) as being anticipated by Sullivan (5,833,553). Independent claims 1, 3, 7, 12, 28 and 29 have been amended to include the limitation "the heavy weight filler comprises no more than about 1.95% volume of the core". This limitation is not shown or suggested by Sullivan. Sullivan, therefore, fails to teach each and every limitation of the amended claims.

Sullivan teaches that the "*amount of filler employed is primarily a function of weight restriction*". There is no indication or suggestion to

limit the amount of filler used to maintain the physical properties of the polybutadiene core. (See Sullivan column 3, lines 34-35). To the contrary, Sullivan teaches that *"weight may be removed from the core and placed in the inner and/or outer cover. This weight will change the moment of inertia of the ball thereby potentially altering performance."* (Column 3, lines 35-39).

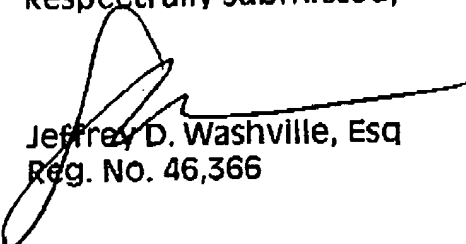
Sullivan clearly fails to show or suggest the benefits of using relatively small volumes of heavy fillers as claimed in the instant invention. Regardless of the filler combinations disclosed by Sullivan, none of the core's have a total filler volume of less than 1.95% of the core.

The core formulations, disclosed in table 6 and throughout the Sullivan specification, teach the use of low specific gravity fillers to reduce costs and/or meet USGA weight requirements. The reference fails to teach either singularly or in combination the use of a polybutadiene core with a heavy weight filler, wherein the total volume of filler is less than 1.95% to maximize a polybutadiene core's rubber properties. For these reasons, the Sullivan reference fails to show or suggest the claimed invention either singly or in combination and should not properly be considered to anticipate claims 1-31, as amended. Reconsideration and removal of the rejections of claims 1-31, as amended, are respectfully requested.

V. Conclusion

The claims as currently submitted are allowable over the Sullivan '553 patent, which does not teach using a heavy weight filler in a relatively small volume to maximize rubber properties. For the foregoing reasons, the application is in condition for allowance, and such action is solicited.

Respectfully submitted,



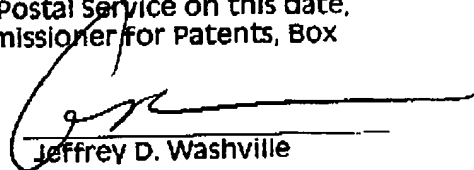
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CERTIFICATE OF MAILING UNDER 37 CFR 1.8

I hereby certify that this Transmittal Letter and any documents referred to as attached hereto are being deposited with the United States Postal Service on this date, January 29, 2003, in an envelope addressed to Assistant Commissioner for Patents, Box Non-Fee Amendment, Washington D.C., 20231,



Jeffrey D. Washville

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MARKED-UP CLAIMS

1. (Twice amended) A golf ball comprising:

a one-piece core made of a mixture of compound components comprising:

a polybutadiene rubber having a cis content of 92% or greater; and,

a heavy weight filler having a specific gravity equal to or greater than about 5.6, wherein the heavy weight filler comprises no more than about 1.95% volume of the core and,

the heavy weight filler is selected from the group consisting of tungsten, bismuth, copper, bismuth oxide, nickel, cobalt, iron, steel, tin, chromium, [zinc,] bismuth subcarbonate, cupric oxide, barium tungstate, cuprous oxide, and mixtures thereof; and,

a cover layer disposed upon the core.

3. (Twice amended) A three-piece wound golf ball comprising:

a one-piece center made of a mixture of compound components comprising:

a polybutadiene rubber having a cis content of 92% or greater; and,

a heavy weight filler having a specific gravity of at least about 5.6, wherein the heavy weight filler comprises no more than about 1.95% volume of the center, and the heavy weight filler is selected from the group consisting of tungsten, bismuth, copper, bismuth oxide, nickel, cobalt, iron, steel, tin, chromium, [zinc,] bismuth subcarbonate, cupric oxide, barium tungstate, cuprous oxide, and mixtures thereof;

a thread winding layer disposed upon the core wherein the thread layer comprises rubber; and,

a cover layer disposed upon the thread winding layer.

5. (Twice Amended) The golf ball of claim 1 wherein the heavy weight filler is selected from the group consisting of bismuth, bismuth oxide, cobalt, iron, steel, tin, chromium, [zinc,] bismuth subcarbonate, ferrous oxide and mixtures thereof.

7. (Twice amended) A method of making a golf ball center comprising the steps of:

selecting a heavy weight filler having a specific gravity of at least about 5.6;

mixing the filler with a polybutadiene rubber, a rubber vulcanizing ingredient and core regrind, wherein the heavy weight filler comprises no more than about 1.95% volume of the center;

producing a plug;

curing the plug in a mold to form the center, wherein the center formed from the plug has a PGA compression lower than 89.3 and a coefficient of restitution higher than .697.

12. (Twice amended) A golf ball solid center comprising:

a compound wherein the compound comprises polybutadiene rubber having a cis content of 92% or greater; and,

an inorganic filler having a specific gravity equal to or greater than about 5.6, mixed with the compound wherein the inorganic filler is selected from the group consisting of tungsten, bismuth, copper, bismuth oxide, nickel, cobalt, iron, steel, tin, chromium, [zinc,] bismuth subcarbonate, cupric oxide, barium tungstate, cuprous oxide, and mixtures thereof, wherein the heavy weight filler comprises no more than about 1.95% volume of the center.

28. (Amended) A golf ball comprising:

a one-piece core wherein the core has a PGA compression lower than 95.7 and a coefficient of restitution higher than .695, and wherein the core is made of a mixture of compound components comprising:

a polybutadiene rubber having a cis content of 92% or greater; and,

a heavy weight filler having a specific gravity equal to or greater than about 5.6, wherein the heavy weight filler comprises no more than about 1.95% volume of the core;

a cover layer disposed upon the core wherein the golf ball produced with the heavy weight filler results in a PGA compression lower than 103.6.

29. (Amended) A three piece wound golf ball comprising:

a one-piece center wherein the center has a PGA compression lower than 95.7 and a coefficient of restitution higher than .695 made of a mixture of compound components comprising:

a polybutadiene rubber having a cis content of 92% or greater; and,

a heavy weight filler having a specific gravity equal to or greater than about 5.6, wherein the heavy weight filler comprises no more than about 1.95% volume of the center;

a thread winding layer disposed upon the center wherein the thread layer comprises rubber forming a core; and,

a cover layer disposed upon the core wherein the golf ball produced with the heavy weight filler results in a PGA compression lower than 103.6.

30. (Twice Amended) The golf ball of claim 28 wherein the heavy weight filler is selected from the group consisting of tungsten, bismuth, copper, bismuth oxide, nickel, cobalt, iron, steel, tin, chromium, (zinc,) bismuth subcarbonate, cupric oxide, barium tungstate, cuprous oxide, and mixtures thereof.